Project Title: Model Based Engine Efficiency

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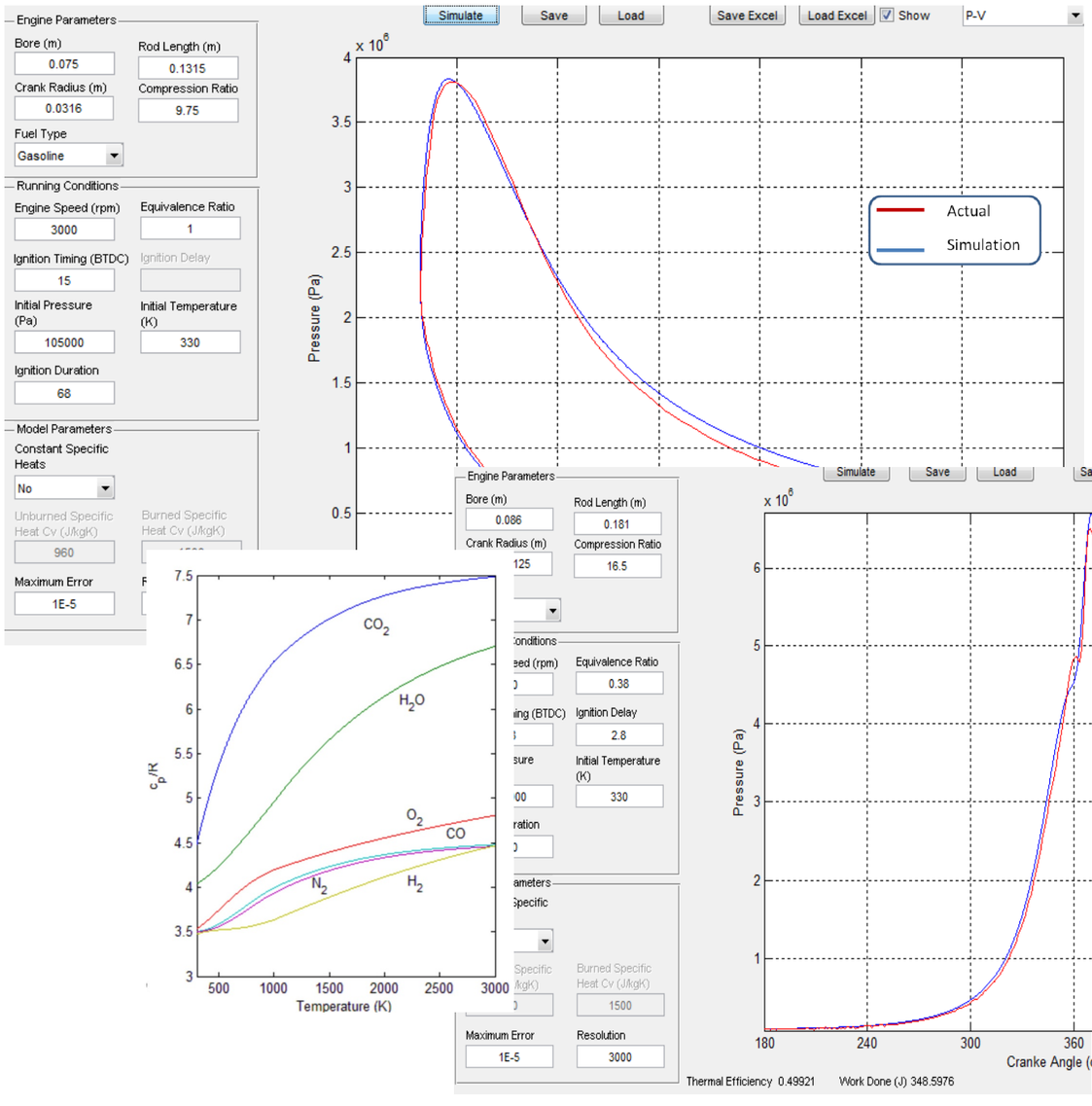
Project Objectives:

Develop an understanding of IC engine fundamentals.
Create a simulation framework to explore and simulate these fundamentals.

Project Summary:

Internal Combustion Engines have become more refined since their first appearance in automotive applications.

Much of the details of combustion are still not well understood, prompting fundamental investigation. Furthermore, to further perfect internal combustion engines and implement future technologies, a deep understanding of the underlying principles is required, in order to understand the technical need of such technology.



Project Conclusions:

From the completion of this Engine Sim tool set, it was exciting to virtually experience in person via the simulation results, the tremendous advantage of running such high compression ratios.
The model was also useful to predict engine behaviour during higher loads and speeds without ever running a real engine.